

# **U.S. Environmental Protection Agency**



**Management Briefing  
R6 EOC – Environmental Section  
May 27, 2010**

# Agenda

- ▶ RV Brooks McCall Data
- ▶ Pre-Impact Data
- ▶ Miscellaneous Data
- ▶ BP Air Data

# RV Brooks McCall Data

## ► Data Files Received

- Cruise Sampling Tracking Spreadsheet
- CTD Graphs
  - Fluorescence
  - Oxygen
  - Salinity
  - Temperature
- LISST Report
- Bulleted Status Report by BP contractor
- Map with Sampling Stations
- GIS Shape Files

# Cruise Sampling Tracking Spreadsheet

Microsoft Excel - 05-25-10 file 1 Cruise\_4\_Sampling\_Tracking\_Master

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	C	D	E	F	H	I	J	K	L	M	N	O	P	Q	R
	Sample_Team	Date	Station	Matrix	SampleID	Time Collected	Time Deployed	Time Sampled	TPH (1L)	VOA (40 ml)	TOX (8 oz)	LaMotte DO (mg/L)	Probe DO (mg/L)	LISST	Notes
1	Entrix	05/23/10	B42	Water	420101-1	15:38	14:49	17:34	Yes	Yes		5.0	6.45	Yes	
2	Entrix	05/23/10	B42	Water	420101-2	15:38	14:49	17:34		Yes				Yes	
3	Entrix	05/23/10	B42	Water	420102-1	15:47	14:49	17:34	Yes	Yes		5.6	6.09	Yes	Slight sheen on Niskin wat
4	Entrix	05/23/10	B42	Water	420102-2	15:47	14:49	17:34		Yes				Yes	
5	Entrix	05/23/10	B42	Water	420103-1	15:52	14:49	17:31	Yes	Yes		5.4	6.44	Yes	Slight sheen on Niskin wat
6	Entrix	05/23/10	B42	Water	420103-2	15:52	14:49	17:31	Yes	Yes				Yes	
7	Entrix	05/23/10	B42	Water	420104-1	15:55	14:49	17:28	Yes	Yes	Yes	5.6	7.22	Yes	Sheen on Niskin water
8	Entrix	05/23/10	B42	Water	420104-2	15:55	14:49	17:28	Yes	Yes				Yes	
9	Entrix	05/23/10	B42	Water	420105-1	15:58	14:49	17:25	Yes	Yes	Yes	5.6	5.98	Yes	Sheen on Niskin water
10	Entrix	05/23/10	B42	Water	420105-2	15:58	14:49	17:25	Yes	Yes				Yes	
11	Entrix	05/23/10	B42	Water	420106-1	16:05	14:49	17:21	Yes	Yes	Yes		5.75	Yes	Sheen on Niskin water
12	Entrix	05/23/10	B42	Water	420106-2	16:05	14:49	17:21		Yes				Yes	
13	Entrix	05/23/10	B42	Water	420107-1	16:08	14:49	17:15	Yes	Yes			6.42	Yes	Sheen on Niskin water

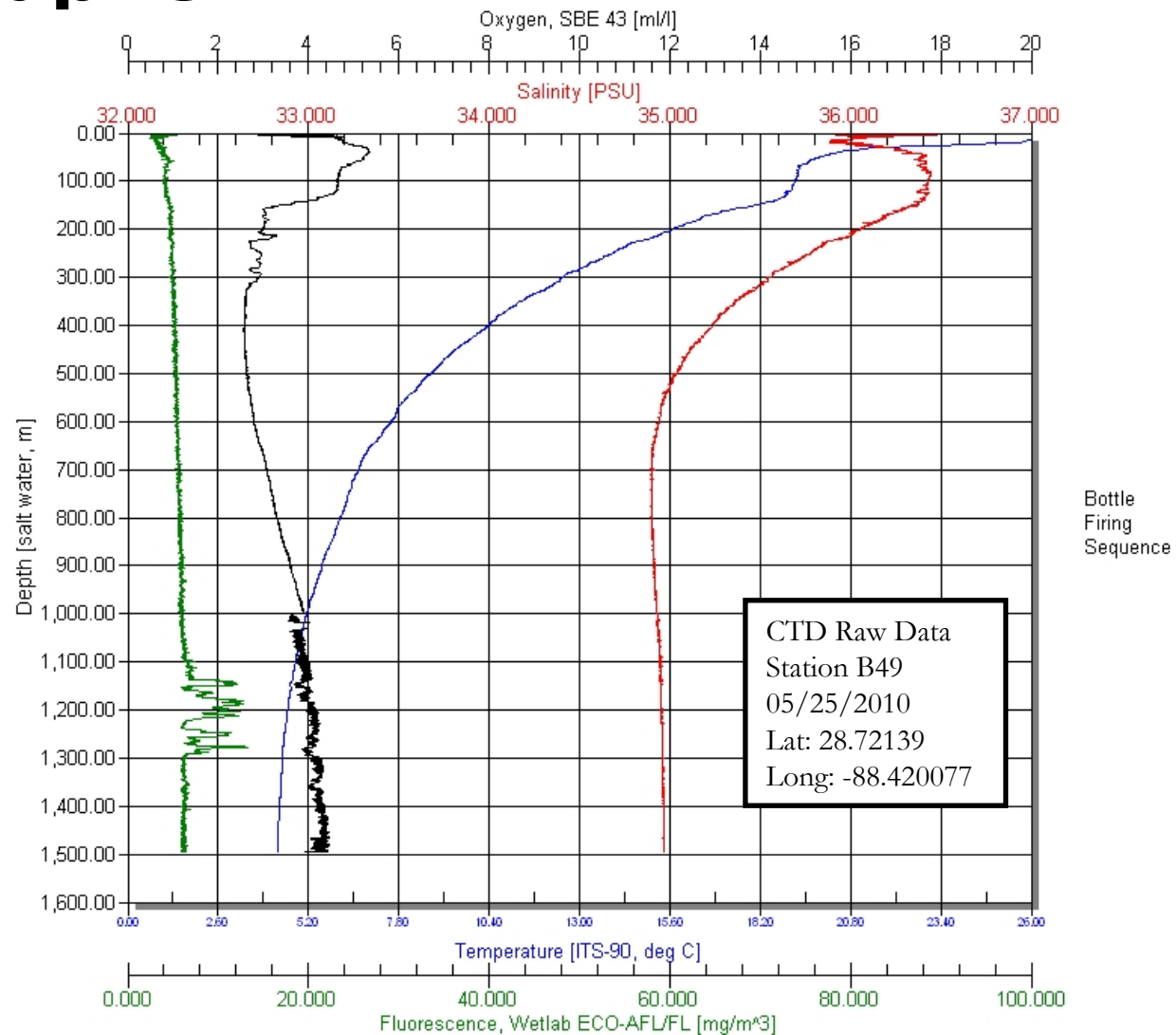
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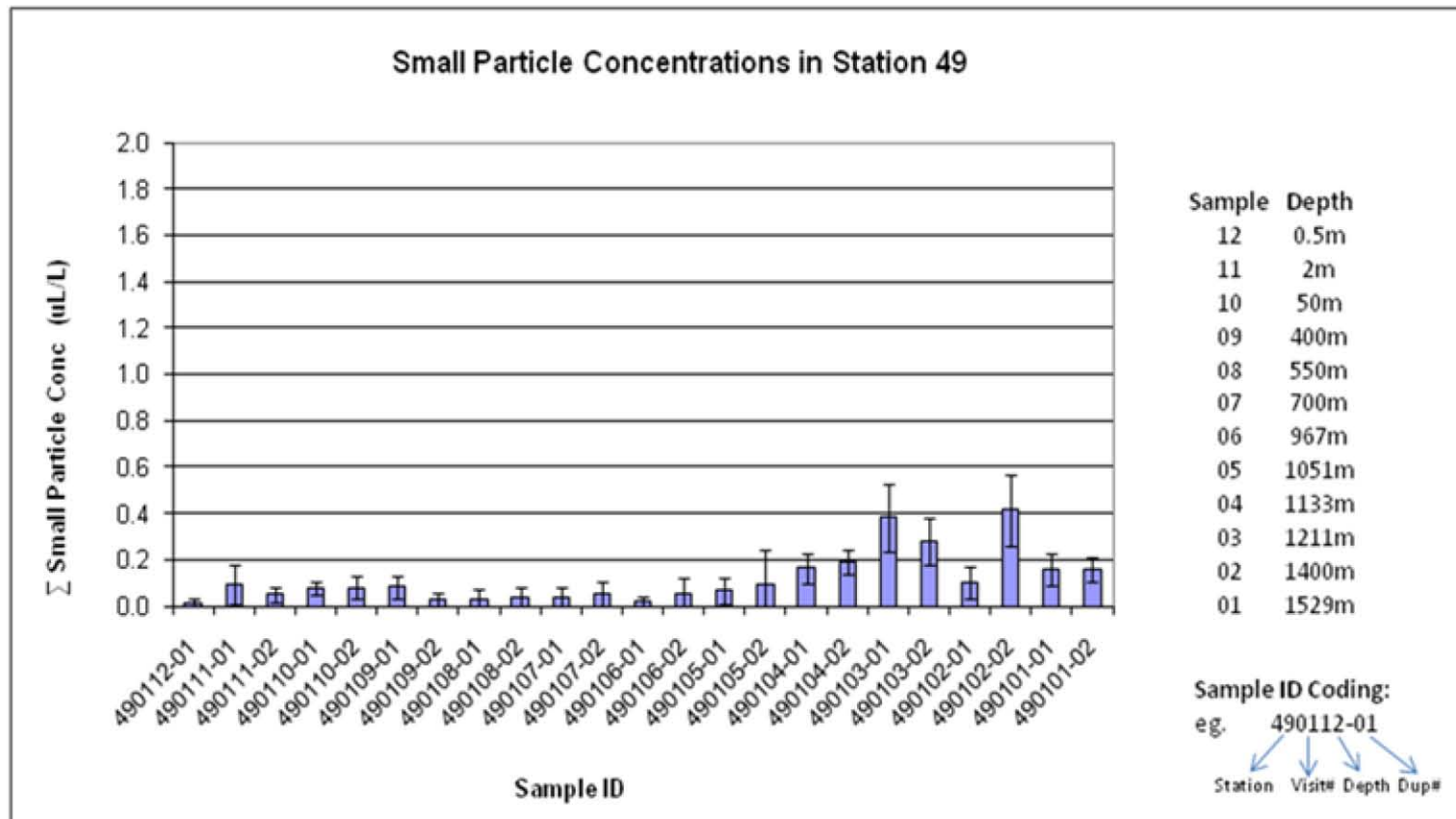


# CTD Graphs



# LISST Report

## ► Laser In-Situ Scattering and Transmissometry



# Bulleted Status Report

- ▶ Discuss station locations and ship movements
- ▶ Provide limited interpretations of various real-time instruments
- ▶ Identify any problems/issues with equipment/instrumentation
- ▶ Provide a list of electronic data files to be forwarded

# Map with Sampling Stations

- ▶ Shows sample stations in relation to the oil well
- ▶ Shows previous sample stations (depending on scale)



# GIS Shape Files

- ▶ Receive various GIS shape files
- ▶ Environmental Section is not using these files

# Pre-Impact Data

▶ Water/Sediment

▶ Air

# Pre-Impact Data for Water/Sediment

- ▶ EPA HQ EOC has the lead for evaluating pre-impact data for water/sediment
- ▶ EPA HQ coordinates with the Region 6 Water Program and the Region 6 Environmental Section once the data evaluation is completed
- ▶ Data is posted on EPA Website  
<http://www.epa.gov/bpspill/epa.html>

# Pre-Impact for Air Data

- ▶ LDEQ has pre-impact data from 3 locations near the spill
- ▶ See Map
  
- ▶ MERAUX
  - Measured for H<sub>2</sub>S, Methane, Non-Methane Organic Carbon, Total Hydrocarbon, SO<sub>2</sub>, Wind Direction
  
- ▶ CHALMETTE- VISTA
  - Measured for H<sub>2</sub>S, Methane, Non-Methane Organic Carbon, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, Wind Direction
  
- ▶ CHALMETTE- HIGH
  - Measured for H<sub>2</sub>S, Methane, Ozone, SO<sub>2</sub>



# Pre-Impact Data Conclusions

- ▶ EPA HQ evaluates the data and coordinates with the Region 6 Water Program and the Region 6 Environmental Section. Data is posted on EPA Website <http://www.epa.gov/bpspill/epa.html>
- ▶ LDEQ has an archive of air data on their website: <http://www.deq.louisiana.gov/portal/tabid/2831/Default.asp>
  - The website can filter for dates and locations. A map is included.
  - Various compounds are sampled in each locations; some overlapping, some non-overlapping.

# Miscellaneous Sample Data

- ▶ Received data for the following ten miscellaneous samples:
  - Source Oil
  - Weathered Oil (2)
  - Oily Debris
  - Sediment
  - Mousse (2)
  - Tar Ball
  - Corexit 9500
  - Corexit 9527
  
- ▶ Two additional samples are pending:
  - Weathered Oil
  - Oil & Water

# Miscellaneous Sample Results

## ► Weather Oil Results

- No VOCs
- No SVOCs (except TICs)
- No Dispersant Indicators (i.e., glycols)
- DRO/ORO present

## ► Oily Debris

- No VOCs
- No SVOCs (except TICs)
- No Dispersant Indicators (i.e., glycols)
- DRO/ORO present



# Miscellaneous Sample Results (cont.)

## ▶ Sediment

- No VOCs
- No Dispersant Indicators (i.e., glycols)

## ▶ Mousse

- No VOCs
- No SVOCs (except TICs)
- No Dispersant Indicators (i.e., glycols)

## ▶ Tar Ball

- No VOCs
- No SVOCs (except TICs)

# Miscellaneous Sample Results (cont.)

## ▶ Corexit 9500®

- No VOCs (except TICs)
- Glycols Detected
  - Di(propylene glycol)butyl ether 152,000 mg/L
  - Propylene glycol 18,200 mg/L

## ▶ Corexit 9527®

- Glycols Detected
  - 2-Butoxyethanol 202,000 mg/L
  - Di(propylene glycol)butyl ether 55,400 mg/L
  - Propylene glycol 21,800 mg/L

# Conclusions – Miscellaneous Samples

- ▶ Oily Samples (weathered oil, oily debris, mousse, and tar ball)
  - No VOCs detected
  - Tentatively Identified Compounds (TICs) for SVOCs detected
  - No Dispersant Indicators (i.e., glycols) detected
  
- ▶ Environmental Media Sample (sediment)
  - No VOCs detected
  - No Dispersant Indicators (i.e., glycols) detected
  
- ▶ Dispersant Samples
  - High Levels of Dispersant Indicators (i.e., glycols) detected

# Air Data (BP)

- ▶ Real Time Data
- ▶ EU is currently evaluating all the data and will give feedback after a detailed review
- ▶ The data was organized into 5 groups
- ▶ **Beaches:**
  - Tactical Strike
    - Results from 5/19
    - VOCs using MULTIRAE(Gas Detection through photo ionization)
    - Very few hits, ranging from 0.3 - 53.4 ppm
    - Odors detected

# Air Data (BP)

## ► Daily summaries from 5/14 – 5/20

- VOCs, H<sub>2</sub>S, SO<sub>2</sub>, Benzene (alone), Particulate Matter (PM<sub>10</sub>), (PM<sub>2.5</sub>)
- PM<sub>10</sub>: 10 µm, PM<sub>2.5</sub>: 2.5 µm
- PM gives information about incomplete combustion after a burn
- Very few exceedances on PM<sub>10</sub>

## ► Action Levels:

- VOCs = 10 ppm; PM<sub>10</sub> (particulates) = 0.15 mg/m<sup>3</sup>
- H<sub>2</sub>S = 0.5 ppm
- Note: Action Levels based on OSHA PEL (VOCs), ATSDR Risk-Based Exposure Levels (PM<sub>10</sub>), and NIOSH RELs

# Air Data (BP)

## ▶ Source Control Vessels / Area Monitoring

- Monitoring on ships (50 locations, 35+ ships)
- MULTIRAE
- Measured for O<sub>2</sub>, H<sub>2</sub>S, CO, VOCs, Benzene, Wind Speed, Wind Direction, LEL (lower explosive limit: The lower explosive limit of a gas or a vapor is the limiting concentration that is needed for the gas to ignite and explode.)

## ▶ Source Control Vessels / Grab Samples

- Found TICs, Volatile Organic Aromatics
- Used TO15 method

# Air Data (BP)

## ▶ Source Control Vessels / Personal Monitoring

- Total Hydrocarbons
- 4/28/10 – 5/13/10
- Below Action Levels for VOCs

## ▶ Source Control Vessels / Real Time Monitoring

- Done on ships and shore (Strike Team)
- Used PID
- Some high hits for VOCs on ships
- Measured O<sub>2</sub>, H<sub>2</sub>S, CO, VOCs, Benzene (alone), LEL, Wind Speed, Wind Direction

# Conclusions for BP Air Data

- ▶ Samples collected on offshore ships/boats as well as on shore
- ▶ Conducted Area Monitoring, Grab Samples, Personal Monitoring, Real Time Monitoring
- ▶ There were very few exceedances with any of the constituents (i.e. VOCs, TICs) or any of the parameters (i.e. LEL, PM 10) measured